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Also, the plate carries charcoal (not represented in Figs. 2 to 5) can be placed on the interior of the frame 1 on the bottom 7b of the piece 7. The heat freed by the plate 7 is also directly removed by the plate 7.

In the claims:

16. (Amended) An electric motor comprising:
a rotor provided with a coil having a first end and a second end axially-spaced from the first end, the rotor mounted rotatably in a hollow frame formed of two parts having respective end walls, the two parts being made of a heat conducting material, and the frame carrying induction means, wherein each of the respective end walls is continuously adjacent to one of the first end and the second end of the coil, and wherein the two parts are directly mounted to each other to form an area of contact perpendicular to a rotational axis of the rotor.
17. (Amended) The motor according to claim 16 wherein the respective end walls envelope the ends of the coil, the first end and the second end being in the shape of buns.
18. (Amended) The motor according to claim 17 wherein the respective end walls of the two parts have a central, bowl-shaped portion.
19. (Amended) The motor according to claim 16 wherein a material of the two parts is non-magnetic.
20. (Amended) The motor according to claim 19 wherein the material is one of "zamac", aluminum, and magnesium.
21. (Amended) The motor according to claim 16 wherein a material of the two parts is at least one of a magnetic material and a magnetizable material.
22. (Amended) An electric motor comprising:

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a rotor provided with a coil having a first end and a second end axially-spaced from the first end, the rotor mounted rotatably in a hollow frame formed of two parts having respective end walls, the two parts being made of a heat conducting material, and the frame carrying induction means, wherein each of the respective end walls is continuously adjacent to one of the first end and the second end of the coil, and wherein the two parts are directly mounted to each other to form an area of contact perpendicular to a rotational axis of the rotor, and wherein one of the two parts of the frame includes at least one part of a gear box casing of an actuator driven by the motor.

23. (Amended) The motor according to claim 16 wherein at least one of the two parts of the frame includes elements on an exterior surface that contribute to an increase in thermal exchange with the ambient air.

24. (Amended) The motor according to claim 23 wherein the at least one of the two parts carries cooling fins.

25. (Amended) The motor according to claim 23 wherein a portion of the at least one of the two parts carries a fixation lug.

26. (Amended) The motor according to claim 16 wherein each of the two pieces of the frame includes its respective end wall and a cylindrical portion extending axially toward the area of contact.

27. (Amended) The motor according to claim 16 wherein each of the two parts has an annular assembly flange forming the area of contact.

28. (Amended) The motor according to claim 27 wherein at least one of the flanges has at least one fixation lug in a plane parallel to the rotational axis.

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29. (Amended) The motor according to claim 16 wherein one of the two parts of the frame has the form of a closing plate on which the other of the two parts is attached.

30. (Amended) An electric motor comprising:
a rotor provided with a coil having a first end and a second end axially-spaced from the first end, the rotor mounted rotatably in a hollow frame formed of two parts having respective end walls, the two parts being made of a heat conducting material, and the frame carrying induction means, wherein each of the respective end walls is continuously adjacent to one of the first end and the second end of the coil, and wherein the two parts are directly mounted to each other to form an area of contact perpendicular to a rotational axis of the rotor, and wherein a plate carrying charcoal is placed at the interior of the frame on one of the respective end walls.

31. (Amended) The motor according to claim 16 wherein the two parts are made of different materials.

32. (New) The motor according to claim 16 wherein the frame is sealed so as to be water- and dust-proof.

33. (New) The motor according to claim 16 wherein one of the two parts has a cylindrical portion extending axially from its respective end wall toward the other of the two parts, the cylindrical portion ending in a radially-extending flange sealingly engaged with an annular portion of the other of the two parts.

34. (New) The motor according to claim 33 wherein the annular portion of the other of the two parts is one of a portion of its respective end wall and a radially-extending flange extending from a cylindrical portion of the other of the two parts.

35. (New) The motor according to claim 33 wherein a plurality of cooling fins extend radially from the cylindrical portion.

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36. (New) The motor according to claim 22 wherein one of the two parts has a cylindrical portion extending axially from its respective end wall toward the other of the two parts, the cylindrical portion ending in a radially-extending flange sealingly engaged with an annular portion of the other of the two parts.

37. (New) The motor according to claim 36 wherein the annular portion of the other of the two parts is one of a portion of its respective end wall and a radially-extending flange extending from a cylindrical portion of the other of the two parts.

38. (New) The motor according to claim 36 wherein a plurality of cooling fins extend radially from the cylindrical portion.

39. (New) The motor according to claim 30 wherein one of the two parts has a cylindrical portion extending axially from its respective end wall toward the other of the two parts, the cylindrical portion ending in a radially-extending flange sealingly engaged with an annular portion of the other of the two parts.

40. (New) The motor according to claim 39 wherein the annular portion of the other of the two parts is one of a portion of its respective end wall and a radially-extending flange extending from a cylindrical portion of the other of the two parts.

41. (New) The motor according to claim 39 wherein a plurality of cooling fins extend radially from the cylindrical portion.